AI Video Analytics

# Product Datasheet

On-premises AI video analytics for existing camera networks

## Overview

AI Video Analytics adds AI video analytics to the cameras you already have. It runs entirely on your own server, receives standard RTSP streams, detects events in real time on an NVIDIA GPU, and delivers alarms to operators, video management systems and your own applications.

It can also run inside Nx Witness and Nx Meta as an analytics layer: operators switch analyses on and off, set zones and find alarms in Nx Desktop without leaving their VMS.

## Video Analytics

| Analysis | Detects |
|---|---|
| PPE | People without a helmet or high-visibility vest |
| Traffic | Vehicles and people crossing a line, by direction |
| Object Detection | Entry, empty or outside region, crowding, occupancy time and abandoned objects — up to five regions per camera |
| Helmetless Biker | Two-wheeler riders without a helmet |
| Fire & Smoke | Flames and smoke |
| Heatmap | Where people move, summarised hourly |
| Face Recognition | Matches against person lists; access records; optional anonymous demographics and anti-spoofing |
| Plate Recognition (ANPR) | Licence plates of 23 countries; one record per vehicle with plate and vehicle pictures and colour; alert and standard plate lists; parking lots with entry/exit sessions and occupancy |
| Custom models | Up to five of your own detection models (ONNX, YOLO-family output), in detection or counting mode |

Every analysis is configured per camera with regions or lines, object classes, five sensitivity levels and optional weekly schedules. AI engines are built on site for the exact GPU in the server.

## Alarms and Automation

- Live alarm feed with evidence image, detail and history.
- Alarm search by analysis, camera, class and time; export to CSV and an executive PDF summary.
- Configurable dashboards shared per role: live alarms, charts, heatmaps, occupancy, server health, face and plate recognition widgets.
- Plate lists with CSV import, tolerant plate matching and operator correction with the original reading kept as evidence.
- Analyses that cannot start (for example because the GPU is full) are shown as not running and restart by themselves when capacity frees up.
- **Event Manager**: visual flows with triggers, conditions, timers and "first A then B" correlation; ready-made templates for common scenarios.

## Integrations

| System | Capability |
|---|---|
| Nx Witness / Nx Meta | Camera import, events and bookmarks, object search with best shot, analytics managed from Nx Desktop, face list actions |
| Milestone XProtect | Alarms with image, region and bookmark over the REST API; operator decisions and precision; evidence lock |
| Cluebase | Alarm delivery |
| IP speakers | Audio announcements (Hikvision ISAPI) |
| E-mail | SMTP alarm notifications with templates |
| Webhooks | HMAC-SHA256 signed JSON to any HTTP endpoint |
| REST API | Versioned API, scoped and expiring API keys, live alarm stream, interactive reference |

## Security and Data Protection

- Role-based access control with separate view and action permissions; LDAP / Active Directory sign-in with group-to-role mapping.
- Password policy, account lockout and a forced password change on first sign-in.
- Audit log of every configuration change, sign-in and lockout, with secrets masked.
- Camera and integration credentials encrypted at rest; never returned by the API or written to logs.
- All internal service connections encrypted with certificate verification; only the HTTPS web gateway is exposed.
- Face data controls: biometric functions off by default, consent records, separate permissions for face images, a dedicated face audit log.
- Signed releases: every update is verified against the supplier's key before any service is changed; older releases are refused.
- Offline licensing — no connection to a licensing server is required.

## Deployment

| Item | Specification |
|---|---|
| Deployment | On-premises, containerised; guided installer with pre-flight checks |
| Operating system | Ubuntu 22.04 LTS or 24.04 LTS, x86_64 |
| GPU | NVIDIA, driver 535 or newer |
| Cameras | Any camera or encoder with an RTSP stream |
| Web console | Modern browsers; English, Turkish, Spanish, Arabic (right-to-left) and Traditional Chinese |
| Updates | From the web console or the command line, with signature verification |
| Diagnostics | One-click support bundle with credentials masked |

Capacity depends on the GPU, the analysis types and the number of cameras. Ask your supplier for a sizing estimate.

Version 2.8.17. Specifications are subject to change.